From the 'fragile rationalist' to 'collective resilience'

J R Coll Physicians Edinb 2021; 51 (S1): S12–9 | doi: 10.4997/JRCPE.2021.236 REVIEW

From the 'fragile rationalist' to 'collective resilience': what human psychology has taught us about the COVID-19 pandemic and what the COVID-19 pandemic has taught us about human psychology

Stephen Reicher[1], Linda Bauld[2]

Abstract

A successful response to the Covid-19 pandemic is dependent on changing human behaviour to limit proximal interactions with others. Accordingly, governments have introduced severe constraints upon freedoms to move and to mix. This has been accompanied by doubts as to whether the public would abide by these constraints. Such doubts are underpinned by a psychological model of individuals as fragile rationalists who have limited cognitive capacities, who panic under pressure and turn a crisis into a tragedy. Drawing on evidence from the UK, we show that this did not occur. Rather, the pandemic has illustrated the remarkable collective resilience of individuals when brought together as a community by the common experience of crisis. This is a crucial lesson for the future, because it underpins the importance of developing leadership and policies that enhance rather than weaken such emergent social identity.

Correspondence to:
Stephen Reicher
School of Psychology and Neuroscience
University of St. Andrews
St Andrews KY16 9JP
UK

Email:
sdr@st-andrews.ac.uk

Keywords: Pandemics, policy, public health, behavior psychology, social psychology, psychological theory, psychological identification, psychological resilience, consensus

Financial and Competing Interests: No conflicts of interest declared

Two psychologies of the crisis

Psychology and the pandemic

At the start of the pandemic, one of us (SR) co-authored a book on the psychology of COVID-19. It started with the following claim:

> …unless or until a vaccine is developed, or we discover medicines to treat the virus, our means of controlling the spread of infection depend on behavioural changes and hence upon human psychology".[1]

But now that we have vaccines it is self-evident that the behavioural questions remain just as important as ever. Vaccines alone solve nothing. It is people getting vaccinated, and the protection that vaccination confers against disease, that will make a difference. So we have to deal with issues of vaccine hesitancy.[2] We also need to address issues of vaccine complacency,[3] and how being vaccinated may affect other behaviours necessary to stop the spread of infection.

Behavioural science has been at the very heart of debates around the pandemic. Issues to do with social influence, behavioural change, the grounds of trust, the basis of community – once the preserve of the tutorial room – have become the topic of talk shows and news bulletins. Relationships have been forged between behavioural scientists, researchers from other disciplines, policymakers and practitioners that rarely existed before. More than ever, behavioural science is seen to matter.

However, the impact of the pandemic lies not only in inviting behavioural scientists to the policymakers table, but also in posing the question of what sort of behavioural science should be used to support the public. More specifically, we wish to contrast two broad psychological approaches to human behaviour that have very different implications for how to respond in a crisis.[4]

Fragile rationalism

One view suggests that people are fragile rationalists who, at the best of times, are beset by biases which lead them to distort information, and find it difficult to cope with complexity and ambiguity and uncertainty. The human condition is deficient in reason and therefore one cannot deal with people through reason.[5] When put under pressure

[1]School of Psychology and Neuroscience, University of St. Andrews; [2]Usher Institute, College of Medicine and Veterinary Medicine, University of Edinburgh

in a crisis, things get still worse. We are prone to panic, to become even more irrational and therefore transform a crisis into a tragedy.[6]

This approach is particularly associated with behavioural economics and popularised through the concept of 'nudge'.[7] It was systematically introduced into the UK Government through the Behavioural Insights Team (or 'nudge unit')[8] established within the Cabinet Office by David Cameron in 2010, since when it has grown considerably in influence. Such an approach has many attractions to policymakers, not least because it is a justification for the existence of the state: if people are incapable of looking after themselves (especially in a crisis) they need someone or something to look after them. At the same time, it leads to a form of paternalism whereby the public are seen as less able, unfit for a conversation of equals and needing to be shielded from hard realities or looming uncertainties. This paternalism is fostered by the belief that people ('the public') will panic in the face of such uncertainties.

This approach has arguably had a major influence in framing the policy response to COVID-19 at the UK level. This was most clearly expressed in the notion of 'behavioural fatigue' which was articulated even before the Coronavirus Act[9] 'stay at home' measures (lockdown) were implemented in England and the devolved nations in March 2020. This term encapsulated the idea that people would be psychologically incapable of dealing with the rigours of strict COVID containment measures for any length of time (and hence it would be counterproductive to bring in such measures before they were absolutely necessary). This arguably contributed to a delay in the introduction of lockdown measures in March 2020[10] and may have greatly increased preventable mortality from COVID-19.[11]

Since March 2020, the term 'behavioural fatigue' along with associated terms ('pandemic fatigue', 'emergency fatigue', 'lockdown fatigue', 'public fatigue') has become endemic in the UK. By October 2020 'pandemic fatigue' had some 200 million hits on Google scholar,[12] and by January 2020 that had risen to 240 million.[13] Almost daily, behavioural scientists are contacted by the media to answer a single question: 'will the public continue to comply with regulations?' The constant fear articulated by government ministers at UK level is that the public will prove to be the weak link in the pandemic response. The narrative is that their inability to desist from social contact will undermine all the measures taken to control infection transmission and, as a result, be to blame for the failure of policies to address the pandemic.

This fear has also been magnified by media coverage that has focused on signs of non-adherence and amplified concerns about pandemic fatigue. Examples of rule breaking have been seized upon[14] and, arguably, this has contributed to perceptions of fragility and lack of resilience among the public and therefore to fears that protective behaviours can not be maintained.

Collective resilience

In contrast to 'the fragile rationalist', a second approach takes a more constructive and collective view of the human psyche and the human subject. According to this view, people do not so much distort and destroy information as create meaning. Critically, we do that together. It is through consensus that a mere individual opinion becomes established as a social fact[15] – something solid enough to form the basis for action. Moreover, others do not just provide the epistemic basis for action but also the practical means. It is through the assumed and actual support of others that we become empowered to enact our understandings.[16] This is not to deny that people can be in error, or that groups can act in pathological ways – they plainly can. However, those pathologies are not so much psycho-pathologies (in the sense of inherent limitations and flaws in the human cognitive system) as socio-pathologies (in the sense of limitations in social systems of belief).

The contrast between the two approaches is particularly stark in a crisis. Whereas 'the fragile rationalist' is seen to become entirely irrational due to the stress of the situation, this latter approach suggests that people become more resilient because the common fate of being in an earthquake or a flood – or a pandemic – leads to the accentuation of a sense of shared identity. We begin to think more collectively (in terms of 'we' not 'I'), to become more concerned for others, and to seek more support from people, and provide more support to them. That is, we develop collective resilience.[17]

The two approaches not only differ in their accounts of how people behave in a crisis, they also have very different implications for how people should be treated. From a 'fragile rationalist' viewpoint, the public are a problem which has to be managed. They cannot be reasoned with. They need to be shielded from unsettling evidence since this will only make them more likely to panic. From a 'collective resilience viewpoint' the main task is to consolidate that fragile sense of shared identity which arises out of a crisis – shared identity amongst the public can also be between the public and authorities – for only if authority is seen as 'of the people' and acting 'for the people' will people take heed of them when seeking to make sense of what is going on and deciding how to act.[18]

What is more, the most effective way for policymakers to build such a sense of shared identity with the public – and hence to increase adherence to laws, rules and regulations – is to treat people as if they are members of a common group: to demonstrate transparency, trust and respect; to listen and to heed what people have to say.[19] In other words, the paternalism that flows from a fragile rationalism perspective is not only misguided from a collective resilience perspective. It is the very worst thing one could do. By treating the public as a deficient 'other' it undermines the ability to engage them in common cause to overcome the crisis.

So, what have we learnt from a year of COVID-19 about the merits and demerits of these two psychologies? Which better

explains the pattern of evidence and which provides a better guide as to how governments in the UK and elsewhere should treat the public?

The public response to COVID-19

The panic myth

Before considering the COVID pandemic itself, it is worth briefly commenting on the wider literature on emergencies and disasters.

For all its currency in popular culture and government fears, panic is a comparatively rare phenomenon.[20] Characteristically, people do not flee blindly from danger. Rather they respond in a controlled and organised way, helping each other out of harm's way, supporting others – not just family and friends but strangers as well – who are vulnerable or hurt. Indeed, when people die in emergencies it is generally more because they stay behind to provide aid than because they trample others in their haste to flee.[21]

Such is the hold of the 'panic myth', however, that when we find evidence of support and solidarity in a disaster, it is often put down to local or national exceptionalism. The heroism of office workers, fire fighters and others during 9/11, for instance is often attributed to a distinctive and 'unbreakable spirit of New York'.[22] Likewise, the way in which, following the 2005 bombings, London simply carried on was attributed to a particularly British 'Blitz spirit'.[23] However, such behaviour is less a sign of unique character than the outcome of the general process of emergent social identity – a consequence of a human 'community spirit'.

Three misconceptions about COVID adherence

Levels of adherence: As we have already noted above, in the COVID pandemic as for emergencies more generally, commentators have been constantly on the lookout for signs of fatigue and failure since before the first lockdown. Ministers at UK level have continuously warned that public irresponsibility endangers the COVID response,[24] media reports have fed us with a diet of 'covidiots',[25] house parties and raves.[26] Certainly, if you go by the public rhetoric it would appear that psychological fragility is very much the order of the day. Indeed, if you ask members of the public whether they think others are abiding by COVID regulations, the response is a resounding no. The great majority of the population believe that others are not complying (a belief undoubtedly increased by media coverage of examples of non-compliance) and 92% of us believe that we ourselves are complying more than the average.[27]

The reality is very different. From the start of the first lockdown, the evidence suggested very high levels of adherence – at least to measures on which people had the necessary resources (more on this presently). This wasn't because people found it easy. Of the 92% who were adhering to 'stay at home' advice during to lockdown, nearly half (44%) were suffering economically or psychologically.[28] Certainly, they were fatigued and badly wanted lockdown to end, but fatigue did not stop adherence.

Since then, levels of adherence have not only stayed high but, if anything, are higher than ever (again, where people have the necessary resources).[29] Indeed, taking the latest figures from the Office of National Statistics (ONS) (release of 26 February covering data collected in the period 10-21 February), 89% of people report handwashing when returning home, 96% wearing a mask in public, 92% avoiding physical contact outside the home, and 88% not having visitors to their home.[30]

This is no reason to be complacent. It is a matter of concern that 12% of people are meeting with others in their homes (and 18% are meeting up socially outside the home). However, the figures do point to the fact that, if there are substantial levels of contact between people (and hence potential for infection transmission) it is not primarily due to people 'flexing the rules'. It is more because the rules are flexible enough to allow, encourage or even require, high levels of contact.

This has been true since the end of the first lockdown at UK level, as the Prime Minister urged people to go to the pub as their 'patriotic duty'[31] and to return to their workplaces or else face the prospect of losing their jobs.[32] It is encapsulated in another figure from the latest ONS release: in mid-February 2021, in the midst of a so-called 'lockdown', 46% of the working population were travelling to their workplaces.

Add to this the fact that some 20% of employees who are able to work from home were not allowed to,[33] and that, despite some 97,000 complaints about unsafe workplaces, there have been no prosecutions for breaches of safety laws,[34] then it becomes even clearer that public non-compliance may be a relatively minor contributor to infection spread despite all the attention given to it.

Reasons for non-adherence: According to the 'frailty' approach, it is not just that people fail to adhere, but that they do so because of their psychological weaknesses. Violation is wilful and comes from negative motives – or at least the atrophy of positive motives. Such a view was apparent in the language of the Prime Minister when, in his speech to the Commons on 22 September, he spoke of people 'brazenly defying the rules'[35] and, later the same day when speaking to the nation, of those who 'flout' the rules.[36]

Here, it is necessary to make a simple but crucial distinction. Certainly, breaking the rules is a matter of behaviour. But not all behaviour is about psychology. As behaviour change theorists point out, it is also about capacities and opportunities.[37] Most obviously, however much they might want to do so, people will not be able to undertake an action if they lack the means or resources necessary to do so. A study from the first lockdown showed that people living in less affluent communities and ethnic minorities were three to six times less likely to remain at home. Not because of differences in motivation – that did not differ between

groups – but because of the difficulties of staying at home and putting food on the table.[38]

This returns to a point twice mentioned above. Adherence may be generally high to those rules whose observance is not dependent on resources. It is a very different matter when it comes to those which are. The key example here is self-isolation. Precise figures for those complying vary from study to study within the UK, from a low of 18%[39] to a high of 60% (although this latter study had a response rate of 16% and since adherence is probably correlated with responding, is probably an overestimate).[40] The true figure is therefore probably between a half and a third.

This reflects the fact that self-isolation is hard to do and that very limited resources are available across the UK to help, in a nation where benefits are determined at UK level and do not differ even with diverse responses to the COVID-19 pandemic within the devolved nations. Finance is certainly part of it (in the UK, only about an eighth of adults are eligible to even apply for the £500 on offer, and of those who do apply, some 70% are refused).[41] But even with finance, how does one self-isolate if one lives in a crowded house with one toilet and bathroom, if one has caring responsibilities to children or to elderly relatives in or out of the house? Where comprehensive support packages are available (like New York's 'take care' scheme which offers money, hotel accommodation, food and medicines, mental health services…[42] even help to walk the dog![43]), adherence is much higher.[44] In New York it stands at 80%.[45]

In sum, it seems that non-compliance in this pandemic may be more to do with opportunity than about motivation. This implies that securing higher compliance may be more to do with supporting than with sanctioning people.

Reasons for adherence: If a 'fragile rationalist' perspective has misled us about both levels of non-adherence and reasons for non-adherence, the same is true of the reasons for adherence. Insofar as people are assumed to be unable (or at least to be inept) at reasoning for themselves, their behaviour is seen to be guided by authorities who seek (as far as possible) to make the right thing to do the easy thing to do. As we have already seen, this supposition is undermined by the fact that people have been adhering despite the fact that it is often very difficult. But equally, it is hard to sustain the claim that adherence is just a matter of doing what one is told.

Many people have noted how trust in the UK Government has fallen catastrophically since the 'Cummings affair' broke in May 2020 and remains historically low.[46] However, as we have seen, levels of adherence did not show a corresponding fall. What is more, the decline in trust was specific to government at the UK level. There was not a corresponding fall in trust in the other devolved nation governments. Indeed, at the end of September 2020 trust in the Scottish Government stood at 61% while the corresponding figure at the UK level was as low as 15%.[47] However, levels of adherence are not significantly different between Scotland and England.

This does not suggest that trust is irrelevant to adherence. Indeed, it may be important. In a recent international study of behavioural intentions in 23 countries during April and May 2020,[48] participants were asked about their intentions to comply with public health measures (for example, willingness to self-isolate when needed) along with trust towards their government to handle the crisis, fellow citizens to comply, and trust in the work of scientists. The researchers found that the actual threat posed by the virus (infections and deaths from COVID-19) was not a strong predictor of individual intentions, but trust in governments, fellow citizens and science was. In Scotland, private government polling shows that some 80% of people regularly agree to the proposition that, on the whole, the best thing to do is what the government suggests. But it does indicate that trust may not be the sole route to adherence and that many people may be adhering not because of and even despite the government. Post-Cummings, those who were most angry at his actions adhered more to show that they were not like him![49] To put it slightly differently, adherence is not a mindless act. People are not simply doing what they are told (which is why describing their behaviour as 'compliance' may be misleading). Rather, they are doing what they consider to be the right thing.

This begs the question of what constitutes 'the right thing'. Here, it is useful to recall the words of Governor Andrew Cuomo of New York at his daily coronavirus briefing of 22 April 2020. In response to a question regarding protests against COVID restrictions, he said: 'You have a responsibility to me. It's not just about you. You have responsibility to me, right? We started here saying, it's not about me. It's about we. Get your head around the we concept. It's not all about you. It's about me too. It's about we'.[50]

To expand on Cuomo's logic, if people think in terms of their individual identity ('I') and individual risks, they may well conclude (especially if they are young and healthy) that the costs of going out are negligible, the costs of staying home alone are great and therefore the overall cost-benefit calculation favours breaking lockdown. But if they think in terms of their collective identity ('we'), then the potential costs of going out could be the infection or even death of other members of the community and hence the calculation skews radically towards staying at home. To put it more technically, the calculus of risk, and hence the definition of what is the right thing to do is a function of whether people think in terms of their individual or social identities.

This pandemic, as with the previous emergencies described, led to the early emergence of a new sense of community and unity[51] which has persisted throughout. Thus on 28 February 2021 (the day this is being written) polling showed that more than three times as many people stated that the pandemic had made their community more united (41%) than stated it had made them less united (13%).[52] It further suggested that this unity was reflected in action, with some 12.4 million adults volunteering to help out in the community.

This sense of community has been shown to be associated with levels of adherence to COVID measures.[53] An early-pandemic UK survey found a sense of 'we are in it together' to be the best predictor of observance of lockdown measures.[54] A series of subsequent studies have corroborated this study. One particularly large study of nearly 50,000 respondents in 67 countries found those who identified with their national community observed COVID restrictions to a greater extent.[55] What is more, there is some experimental evidence that framing messages in terms of collective as opposed to personal interest increases intentions to adhere[56,57] and leaders who succeed in building public adherence do so by means of constructing a strong sense of shared identity.[58,59]

All this work points to the prescience (and the science) of Cuomo's words. An understanding of the reasons for adherence does indeed depend upon getting our head around the 'we concept' (or, to be more technical, around the nature of social identity processes).[60] Conversely, an understanding of human behaviour which acknowledges the power of communal processes is essential to developing an effective response to this crisis.

Rethinking the psychology of crisis: short- and long-term implications

This brief overview of behavioural responses to the pandemic shows that, for COVID as for other crises, resilience more than frailty seems the order of the day. This is most obvious at a descriptive level. For all the ongoing fears about people lacking the psychological ability to cope with COVID restrictions and the concern that the public would be the weak link in the pandemic response, the opposite has proved to be the case. The real story of this crisis in the UK and probably elsewhere has been the mundane heroism of many millions of people who have stayed quietly at home, avoiding the social contacts with friends and family that they crave – even if this makes far less of a headline than the tens or occasionally hundreds of people at a rave or house party.

But the contrast between resilience and frailty approaches is equally stark at an explanatory level. Even when people failed to adhere, weak or ill-will had little to do with it and when people did adhere it was rooted in a sense of 'we-ness'. It was facilitated by the emergence of community support structures throughout the country which helped people through the crisis in multiple ways: from checking in to see if they were OK, to delivering food, to assisting with caring responsibilities (for instance, by developing online activities for children).[61] Indeed, such mutual community level activity was critical in supporting people where traditional national and local government services were unable to cope.[62]

Of course, it is a stretch to assert that community formation and community engagement play a central part in combatting contagion.[63,64] However, a psychology of collective resilience complements and consolidates these public health insights by explaining how communities can be formed (but also, how they can be undermined) and by explicating the processes through which community impacts behaviour.

There is a further important point. The problem with a fragility perspective lies not just with its inability to account for how people respond in a crisis (and more widely). It lies equally (if not more) in the ways that it underpins responses that can have profound and troubling impacts on the response. We have already pointed to the way in which the notion of 'behavioural fatigue' may have delayed action in March 2020 (on 11 March, Deputy Chief Medical Officer for England, Dr Jenny Harries told NBC News: 'Timing of an intervention is absolutely critical. Put it in too early, you have a time period [where] people actually get non-compliant – they won't want to keep it going for a long time').[65] The impact of such ideas does not stop there.

To start with, the continuous concern with people breaking the rules, along with messaging that warns against such behaviour, arguably runs the danger of promoting the very behaviours that it warns against. By telling people that others do not adhere, one can create a norm of non-adherence, which then makes such behaviour seem more acceptable.[66] Moreover, if everybody else is at the party, what is the point of missing out at home?

Equally, there is a risk that a narrative of blame may encourage people to perceive their neighbours as a problem, to suspect them of acting selfishly if they see them going out or else others coming into their house rather than asking whether they need help in order to be able to cope with restrictions. It may go some way to explain why so many of us think that others are violating the rules. It certainly does nothing to sustain that sense of community which is at the core of a successful COVID response.[67]

But the blame narratives do not just disrupt the sense of shared identity amongst members of the public. As we have already suggested, they can also set the government in opposition to the public by making laws, rules and regulations seem like an alien imposition rather than an expression of shared values. They thereby undermine adherence.[68,69] And it is not just about blame. It is all the more general forms of paternalism which flow from the notion that the public psychology is inherently flawed and not up to the rigours of dealing with a crisis: the lack of transparency and fear of giving a full and frank assessment of mistakes, the refusal to acknowledge mistakes, the lack of respect and trust rooted in the notion that the public are not a partner but a ward of government. There is a strong conceptual basis for considering that all of these split government from society and an urgent need for research to address these issues in the context of COVID.

Finally, were all this not serious enough alone, the reluctance to be open about risks and a tendency to excessive optimism in order to preserve 'morale' and prevent 'panic' misses the fact that far from deaths in disasters stemming from the

provision of too much information, it is far more common that people die because they are given too little information, too late and hence fail to protect themselves from danger.[70]

In practical terms, what all these arguments point to is the need to pivot away from the sense that the public are part of the problem during this pandemic to a clear articulation that they are part of the solution. Instead of blaming people for non-adherence we need to praise them for their remarkable adherence. Instead of publicising stories of occasional gross violations we need to tell stories of mundane observances.[71] And, most importantly, instead of concentrating on what can be done to stop non-adherence, the focus of authorities should be on how to support people so that they can adhere. Not only will such support overcome the practical barriers to adherence and hence deal with the major reasons why people are breaking the COVID rules, it will also demonstrate that governments are indeed on the side of the people and hence enhance the motivation to adhere.

For the longer term, one of the few positive things to come out of this grim pandemic in the UK and elsewhere is that it has shown us the remarkable and inspirational resilience of individuals when brought together as a community. Going forward, this is a lesson we must not forget. In terms of public health, it underpins the importance both of acting in ways that enhance rather than weaken the fragile sense of social identity that emerges in a crisis and also of engaging community groups as a central element in crisis response plans.

More widely, it encourages us to rethink the relationship between the state and society. On the one hand, government should acknowledge the power of community members to self-organise and to play a role in providing services to each other. On the other hand, it is equally important not to use this as an excuse to withdraw public funding and expect communal self-organisation to take up the slack. As has been made clear during the pandemic, self-organisation is not easy and it becomes ever harder to maintain over time (especially in more deprived communities) without help, training and resources from central or local authorities.[72,73]

The model, then, is of a state that scaffolds self-organisation. It is not necessarily a cheap option. However, it is an effective option in terms of creating and sustaining the resilience which we have seen over the last year and which will be so important in facing up to the shocks that are to come.

References

1 Jetten J, Reicher SD, Haslam SA et al. *Together Apart: The Psychology of COVID-19*. London: Sage; 2020. p.3.
2 WHO (2020). *Behavioural considerations for acceptance and uptake of COVID-19 vaccines.* [Internet]. Geneva: World Health Organization. [Accessed 11 March 2021]. Available from: https://www.who.int/publications/i/item/9789240016927
3 Reuters. *WHO warns against pandemic complacency amid vaccine rollout* [Internet]. 4 December 2020 [Accessed 21 February 2021]. Available from: https://www.reuters.com/article/health-coronavirus-who/who-warns-against-pandemic-complacency-amid-vaccine-rollout-idINKBN28E2JB
4 Reicher SD, Drury D, Stott C. The two psychologies and coronavirus. [Internet]. *The Psychologist*. 1 April 2020. [Accessed 21 February 2021]. Available from: https://thepsychologist.bps.org.uk/two-psychologies-and-coronavirus
5 Mols F, Haslam SA, Jetten J et al. Why a nudge is not enough: a social identity critique of governance by stealth. *European Journal of Political Research* 2015; 54: 81-98. See also Mols F. Behaviour change. In Jetten J, Reicher SD, Haslam SA et al. (eds.). *Together Apart; The Psychology of COVID-19*. London: Sage; 2020. pp.36-40.
6 Drury J, Reicher SD, Stott C. COVID-19 in context: why do people die in emergencies? It's probably not because of collective psychology. *Br J Soc Psychol* 2020; 59: 686-93.
7 Thaler RH, Sunstein CR. *Nudge: Improving Decisions about Health, Wealth and Government*. New Haven: Yale University Press: 2008.
8 The Behavioural Insights Team. *Nudge 2.0* [Internet]. London: BIT. [Accessed 9 April 2021]. Available from: https://www.bi.team/blogs/nudge-2-0/
9 Legislation.gov.uk. *Coronavirus Act 2020* [Internet]. London: UK Government. [Accessed 9 April 2021]. Available from: https://www.legislation.gov.uk/ukpga/2020/7/contents/enacted
10 Kabbasi, A. (2020) Behavioural fatigue: a flawed idea central to a flawed pandemic response. *BMJ* 2020: 370: m3093.
11 Stewart H, Sample I. *Coronavirus: enforcing UK lockdown one week earlier 'could have saved 20,000 lives'*. [Internet]. London: The Guardian. 11 June 2020 [Accessed 11 March 2021]. Available from: https://www.theguardian.com/world/2020/jun/10/uk-coronavirus-lockdown-20000-lives-boris-johnson-neil-ferguson
12 Michie S, West R, Harvey N. The concept of "fatigue" in tackling covid-19. [Internet]. *BMJ Opinion*. 26 October 2020 [Accessed 11 March 20121]. Available from: https://blogs.bmj.com/bmj/2020/10/26/the-concept-of-fatigue-in-tackling-COVID-19
13 Reicher SD, Drury J. Pandemic fatigue? How adherence to covid-19 regulations has been misrepresented and why it matters. *BMJ* 2021; 372: n137.
14 BBC News. *Covid: Beach car parks shut to stop lockdown rule-breakers* [Internet]. London: BBC News. 28 February [Accessed 9 April 2021]. Available from: https://www.bbc.co.uk/news/uk-wales-56229815
15 Turner JC, Oakes PJ, Haslam SA et al. Self and collective: cognition and social context. *Personality and Social Psychology Bulletin* 1994; 20: 454-63.
16 Reicher S, Hopkins N, Stevenson C et al. Identity enactment as collective accomplishment: religious identity enactment at home and at a festival. *British Journal of Social Psychology* 2020.
17 Drury J. The role of social identity processes in mass emergency behaviour: an integrative review. *European Review of Social Psychology* 2018; 29: 38-81.
18 Turner JC. *Social Influence*. Milton Keynes: Open University Press; 1991.
19 Tyler TR, Blader SL. The group engagement model: procedural justice, social identity, and cooperative behavior. *Pers Soc Psychol Rev* 2003; 7: 349-61.
20 Wessely S. Don't panic! Short and long term psychological reactions to the new terrorism: the role of information and the authorities. *Journal of Mental Health* 2005; 14: 1-6.

21 Drury J, Novelli D, Stott C. Representing crowd behaviour in emergency planning guidance: 'mass panic' or collective resilience? *Resilience* 2013; 1: 18-37.
22 9/11 Memorial and Museum. *Tribute in light* [Internet]. [Accessed 11 March 2021]. Available from: https://www.911memorial.org/visit/memorial/tribute-light
23 Freedland J. *How London carried on* [Internet]. London: The Guardian. 7 July 2006 [Accessed 11 March 2021]. Available from: https://www.theguardian.com/uk/2006/jul/07/july7.uksecurity4
24 Devlin K. *Matt Hancock warns public must take 'personal responsibility' to get new strain of coronavirus under control* [Internet]. London: The Independent. 20 December 2020 [Accessed 11 March 2021]. Available from: https://www.independent.co.uk/news/uk/politics/coronavirus-new-strain-matt-hancock-b1776726.html
25 Reicher S. *Don't blame 'selfish covidiots'. Blame the British government* [Internet]. London: The Guardian. 2 September 2020 [Accessed 11 March 2021]. Available from: https://www.theguardian.com/commentisfree/2020/sep/02/selfish-covidiots-blame-british-government-greek
26 Reicher S. *Scapegoating young people for Britain's rising coronavirus rates is a poor strategy* [Internet]. London: The Guardian. 9 September 2020 [Accessed 11 March 2021]. Available from: https://www.theguardian.com/commentisfree/2020/sep/09/scapegoating-young-people-britain-coronavirus-rates
27 UCL News. *Majority feel they comply with Covid-19 rules better than others* [Internet]. London: UCL. 4 December 2020 [Accessed 11 March 2021]. Available from: https://www.ucl.ac.uk/news/2020/dec/majority-feel-they-comply-COVID-19-rules-better-others
28 The Policy Institute. *The accepting, the suffering and the resisting: the different reactions to life under lockdown* [Internet]. London: King's College London. 27 April 2020 [Accessed 11 March 2021]. Available from: https://www.kcl.ac.uk/policy-institute/assets/Coronavirus-in-the-UK-cluster-analysis.pdf
29 Fancourt D, Bu F, Mak HW et al. *Covid-19 social study: results release 28* [Internet]. London: UCL. 13 January 2021 [Accessed 11 March 2021]. Available from: https://b6bdcb03-332c-4ff9-8b9d-28f9c957493a.filesusr.com/ugd/3d9db5_bf013154aed5484b970c0cf84ff109e9.pdf
30 Office for National Statistics. *Coronavirus and the social impacts on Great Britain: 26 February 2021* [Internet]. London: ONS. 26 February 2021 [Accessed 26 February 2021]. Available from: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/coronavirusandthesocialimpactsongreatbritain/26february2021#main-indicators
31 Grant M. *It's our patriotic duty to go to the pub, and save one of Britain's last great institutions* [Internet]. London: The Telegraph. 24 June 2020 [Accessed 11 March 2021]. Available from: https://www.telegraph.co.uk/news/2020/06/24/patriotic-duty-go-pub-save-one-britains-last-great-institutions/
32 Fleet Street Fox Columnist. *Boris Johnson's job is at risk if you don't go back to the office. What's not to like?* [Internet]. London: The Mirror. 28 August 2020 [Accessed 11 March 2021]. Available from: https://www.mirror.co.uk/news/politics/boris-johnson-working-from-home-22593267
33 Rawlinson K, Packham A. *One in five going into workplace unnecessarily amid UK Covid crisis* [Internet]. London: The Guardian. 11 February 2021 [Accessed 11 March 2021]. Available from: https://www.theguardian.com/world/2021/feb/11/one-in-five-britons-going-into-workplace-unnecessarily-covid
34 Wall T. *Firms accused of putting workers' lives at risk by bending lockdown trading rules* [Internet]. London: The Observer. 16 January 2021 [Accessed 11 March 2021]. Available from: https://www.theguardian.com/politics/2021/jan/16/bosses-accused-putting-workers-lives-risk-bending-lockdown-trading-rules
35 Gov.uk. *PM Commons statement on coronavirus: 22 September 2020* [Internet]. London: Government 22 September 2020 [Accessed 9 April 2021]. Available from: https://www.gov.uk/government/speeches/pm-commons-statement-on-coronavirus-22-september-2020
36 Gov.uk. *PM Commons statement on coronavirus: 22 September 2020* [Internet]. London: Government 22 September 2020 [Accessed 11 March 2021]. Available from: https://www.gov.uk/government/speeches/prime-ministers-statement-on-coronavirus-covid-19-22-september-2020
37 Michie S, Van Stralen MM, West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implement Sci* 2011; 6: 42.
38 Atchison CJ, Bowman L, Vrinten C et al. Perceptions and behavioural responses of the general public during the COVID-19 pandemic: a cross-sectional survey of UK adults. *MedRxiv* 2020.
39 Smith LE, Potts HW, Amlot R et al. Adherence to the test, trace and isolate system: results from a time series of 21 nationally representative surveys in the UK (the COVID-19 Rapid Survey of Adherence to Interventions and Responses [CORSAIR] study). *MedRxiv* 2020.
40 EMG, SPI-B and SPI-M. *Reducing within- and between-household transmission in light of new variant SARS-Cov-2* [Internet]. EMG, SPI-B and SPI-M 15January 2021 [Accessed 9 April 2021]. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/952799/s1020-Reducing-within-between-household-transmission.pdf
41 Halliday J. *Majority in England turned down for self-isolation support, data shows* [Internet]. London: The Guardian. 2 February 2021 [Accessed 11 March 2021]. Available from: https://www.theguardian.com/world/2021/feb/02/majority-in-england-turned-down-for-self-isolation-support-data-shows
42 NYC Health + Hospitals. *Take Care* [Internet]. New York: NY Health + Hospitals. [Accessed 11 March 2021]. Available from: https://www.nychealthandhospitals.org/test-and-trace/take-care/
43 NYC Health + Hospitals. *Test & Trace Corps announces partnership with Wag! to provide companion animal services for New Yorkers who need to safely separate* [Internet]. New York: NY Health + Hospitals. [Accessed 11 March 2021]. Available from: https://www.nychealthandhospitals.org/pressrelease/test-trace-corps-partners-with-wag-to-provide-pet-services-for-new-yorkers/
44 SPI-B. *The impact of financial and other targeted support on rates of self-isolation or quarantine* [Internet]. SPI-B 16. September 2020 [Accessed 11 March 2021]. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/925133/S0759_SPI-B__The_impact_of_financial_and_other_targeted_support_on_rates_of_self-isolation_or_quarantine_.pdf
45 Patel J, Fernandes G, Anchuri K. *Self-isolation: support, monitoring and adherence. A scoping review of international approaches. COVID-19 Policy series: Global Health Governance Programme* [Internet]. Edinburgh: University of Edinburgh. 20 January 2021 [Accessed 11 March 2021]. Available from: https://static1.squarespace.com/static/56ebbd6827d4bdff1f7e7ae1/t/600ff28547f88841394166bb/1611657863707/COVID+Isolation+Review+GHGP+20012021.pdf
46 Fancourt D, Steptoe A, Wright L. The Cummings effect: politics, trust, and behaviours during the COVID-19 pandemic. *Lancet* 2020; 396: 464-65.
47 Scottish Government. *Survey shows high levels of trust in Scottish Government* [Internet]. Edinburgh: Scottish Government. 29 September 2020 [Accessed 11 March 2021]. Available from: https://www.gov.scot/news/survey-shows-high-levels-of-trust-in-scottish-government/
48 Pagliaro S, Sacchi S, Pacilli M et al. Trust predicts COVID-19 prescribed and discretionary behavioural intentions in 23 countries. *PLOS ONE*; 2021.

49 LSE. *Public compliance and COVID-19: Did Cummings damage the fight against the virus, or become a useful anti-role model?* [Internet]. London: LSE. 15 June 2020 [Accessed 11 March 2021]. Available from: https://blogs.lse.ac.uk/politicsandpolicy/public-compliance-COVID19-june/

50 Rev Transcripts. *Andrew Cuomo New York COVID-19 Briefing Transcript April 22* [Internet]. 22 April 2020. [Accessed 11 March 2021]. Available from: https://www.rev.com/blog/transcripts/andrew-cuomo-new-york-COVID-19-briefing-transcript-april-22

51 Office for National Statistics. *Coronavirus (COVID-19) roundup: People and social impacts* [Internet]. London: ONS. [Accessed 11 March 2021]. Available from: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/articles/coronaviruscovid19roundupeopleandsocialimpacts/2020-07-03#unitydivision

52 Haroon Siddique. *Covid has connected UK communities and spurred volunteering, report finds* [Internet]. London: The Guardian. 28 February 2021 [Accessed 11 March 2021]. Available from: https://www.theguardian.com/world/2021/feb/28/covid-has-connected-uk-communities-and-spurred-volunteering-report-finds?CMP=share_btn_tw

53 Drury J, Carter H, Ntontis E et al. Public behaviour in response to the COVID-19 pandemic: understanding the role of group processes. *BJPsych Open* 2020; 7: E11.

54 Jackson J, Posch C, Bradford B et al J. *The lockdown and social norms: why the UK is complying by consent rather than compulsion* [Internet]. London: LSE. 27 April 2020 [Accessed 11 March 2021]. Available from: https://blogs.lse.ac.uk/politicsandpolicy/lockdown-social-norms/

55 Van Bavel J, Cichocka A, Capraro V et al. National identity predicts public health support during a global pandemic. Results from 67 nations. *PsyArXiv*; 2020.

56 van der Linden C, Savoie J. Does collective interest or self-interest motivate mask usage as a preventive measure against COVID-19? *Can J Polit Sci* 2020; 53: 391-97.

57 Jordan JJ, Yoeli E, Rand DG. Don't get it or don't spread it? Comparing self-interested versus prosocial motivations for COVID- 19 prevention behaviors. *PsyArXiv*; 2020.

58 Vignoles V, Jaser Z, Taylor F et al. Harnessing shared identities to mobilise resilient responses to the COVID-19 pandemic. *Political Psychology* 2021.

59 Wilson S. Pandemic leadership: lessons from New Zealand's approach to COVID-19. *Leadership* 2020; 16: 279-93.

60 Reicher S, Spears R, Haslam SA. The social identity approach in social psychology. In Wetherell M, Mohanty CT (eds.). *The Sage Handbook of Identities*. London: Sage; 2010. pp.45-62.

61 Mao G, Fernandes-Jesus M, Evangelos N et al. What have we learned so far about COVID-19 volunteering in the UK? A rapid review of the literature. *Medrxiv*; 2020.

62 Kaye S, Tiratelli L. *Communities vs coronavirus: The rise of mutual aid* [Internet]. London: New Local. 13 July 2020 [Accessed 11 March 2021]. Available from: https://www.newlocal.org.uk/publications/communities-vs-coronavirus-the-rise-of-mutual-aid/

63 Laverack G, Manoncourt E. Key experiences of community engagement and social mobilization in the Ebola response. *Glob Health Promot* 2016; 23: 79-82.

64 Costello A. *A Social Vaccine for Ebola. A lesson for the Democratic Republic of Congo* [Internet]. The Social Edge. 20 May 2018 [Accessed 11 March 2021]. Available from: https://www.anthonycostello.net/2018/05/20/a-social-vaccine-for-ebola-a-lesson-for-the-democratic-republic-of-congo/

65 Mahase E. Fact check: COVID-19: Was the decision to delay the UK's lockdown over fears of "behavioural fatigue" based on evidence? *BMJ* 2020; 370: m3166.

66 Schultz PW, Nolan JM, Cialdini RB et al. The constructive, destructive, and reconstructive power of social norms. *Psychol Sci* 2007; 18: 429-34.

67 Reicher S. *Don't blame 'selfish covidiots'. Blame the British government* [Internet]. London: The Guardian. 2 September 2020 [Accessed 11 March 2021]. Available from: https://www.theguardian.com/commentisfree/2020/sep/02/selfish-covidiots-blame-british-government-greek

68 Tyler TR, Blader SL. The group engagement model: procedural justice, social identity, and cooperative behavior. *Pers Soc Psychol Rev* 2003; 7: 349-61.

69 Tyler T. *Why People Obey the Law.* Princeton, NJ: Princeton University Press; 2006.

70 Drury J, Reicher SD, Stott C. COVID-19 in context: why do people die in emergencies? It's probably not because of collective psychology. *Br J Soc Psychol* 2020; 59: 686-93.

71 Reicher S. *Most of us are sticking to the lockdown rules, so why do we blame one another?* [Internet]. London: The Guardian. 15 January 2021 [Accessed 11 March 2021]. Available from: https://www.theguardian.com/commentisfree/2021/jan/15/lockdown-rules-blaming-covidiots-compliance

72 McCabe A, Wilson M, Macmillan R. *Stronger than anyone thought: Communities responding to COVID-19* [Internet]. London: Local Trust; 2020. [Accessed 11 March 2021]. Available from: https://localtrust.org.uk/insights/research/stronger-than-anyone-thought-communities-responding-to-COVID-19/

73 Felici M. *Social capital and the response to Covid-19* [Internet]. Cambridge: Bennett Institute for Public Policy. 21 April 2020 [Accessed 11 March 2021]. Available from: https://www.bennettinstitute.cam.ac.uk/blog/social-capital-and-response-COVID-19/